

WHAT IS CLAIMED IS:

1. A Global Positioning System (GPS)-based positioning system, comprising:
  - a GPS terminal, including:
    - a GPS section for receiving and processing a GPS signal;
    - 5 a call processing section, coupled to the GPS section via an interface, a first message being passed from the call processing section to the GPS section via the interface, and a second message is passed via the interface from the GPS section to the call processing section in response thereto, wherein the first message is a Quality of Service (QoS) message and the second message is a QoS response message;
    - a location aiding server; and
    - a communication system, coupled to the GPS section and the call processing section, for selectively transmitting first data to the GPS terminal from the location aiding server and receiving data from the GPS terminal to be sent to the location aiding server, based on the first message and the second message.
2. The system of claim 1, wherein the location aiding server calculates a position of the GPS terminal based upon data received from the GPS terminal.
3. The system of claim 2, wherein the GPS section further comprises a processor separate from the call processor.
- 20 4. The system of claim 3, wherein the call processor uses a predetermined strategy to determine content of the second message.

5. The system of claim 4, wherein the predetermined strategy employed by the call processor of the GPS section is determined by at least one parameter selected from a group comprising: a signal level of received satellite signals, a number of satellites from which signals are  
5 being received, a frequency range used for searching for satellites, a time range used for searching for satellites, and a current searching status of the GPS section.

6. The system of claim 5, wherein the second message comprises a message indicating that a QoS request can be met by the GPS section.

7. The system of claim 5, wherein the second message comprises a message indicating that a QoS request can not be obtained by the GPS section and can be obtained if additional time is granted by the call processor.

15 8. The system of claim 7, wherein the call processor switches an operational mode of the GPS section in response to the second message.

9. The system of claim 7, wherein the GPS section switches an operational mode of the GPS section based on content of the second message.

20 10. The system of claim 5, wherein the second message comprises a message indicating that a QoS request cannot be obtained by the GPS section.

11. The system of claim 10, wherein the call processor switches an operational mode of the GPS section in response to the second message.

12. The system of claim 10, wherein the GPS section switches an operational mode of  
5 the GPS section based on content of the second message.

13. The system of claim 10, wherein the location aiding server sends aiding data to the GPS section.

14. The system of claim 7, wherein the location aiding server sends aiding data to the GPS section.